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| APPLICATION NO.                                                                            | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/814,131                                                                                 | 04/01/2004  | Franz Pitschi        | 1633.0132C          | 8103             |
| 27896                                                                                      | 7590        | 06/06/2005           | EXAMINER            |                  |
| EDEL, SHAPIRO & FINNAN, LLC<br>1901 RESEARCH BOULEVARD<br>SUITE 400<br>ROCKVILLE, MD 20850 |             |                      | MAYO III, WILLIAM H |                  |
|                                                                                            |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                                            |             |                      | 2831                |                  |

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/814,131

Applicant(s)

PITSCHI, FRANZ

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13-15 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 6-12 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present Application No. 10/814,131, filed on April 1, 2004.

### *Specification*

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The abstract of the disclosure is objected to because in lines 6 and 10-15, the abstract refers to purported merits or speculative applications of the invention, which is

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improper content for the abstract. The applicant should delete the sentences to provide the abstract with proper content. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

4. The disclosure is objected to because of the following informalities: The specification doesn't contain the proper headings are denoted above. The applicant should replace the current headings in the specification with the headings are denoted above to provide the specification with clarity.

Appropriate correction is required.

### ***Claim Objections***

5. Claim 19 is objected to because of the following informalities: Claim 19, line 3, contains the term "insulting" which is the improper spelling for –insulating--. The applicant should replace the term with –insulating--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 13, and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Forsyth et al (Pat Num 3,902,000, herein referred to as Forsyth). Forsyth discloses a coaxial line that is utilized in a superconducting transmission line (Col 1, lines 5-11). Specifically, with respect to claim 1, Forsyth discloses a coaxial line (Figs 1-3) comprising a tubular inner conductor (S1), an outer conductor (S2), a plurality of insulating material struts (B) between the inner conductor (S1) and the outer conductor

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(S2), and a plurality of connections (top of B) capable of conducting a coolant (cryogenic fluid) through the coaxial line (Col 4, lines 27-30), wherein the inner conductor (S1) is configured to permit the coolant (cryogenic fluid) to be conducted through the tubular inner conductor (Col 5, lines 25-36). With respect to claim 2, Forsyth discloses at least some of the insulating material struts (B) include conduits (45) through which the coolant (cryogenic fluid) may be supplied and removed (Fig 4). With respect to claim 3, Forsyth discloses that some of the insulating material struts (B) are arranged as tubes (Fig 1), which are led outward through the outer conductor (S2, Fig 3). With respect to claim 4, Forsyth discloses that the insulating material struts (B) are implemented as full disks having radial conduits (Fig 3). With respect to claim 5, Forsyth discloses that the conduits (45) of the insulating material struts (B) open into a chamber (HH) in an inner conductor connecting element (stress cone 11) at the end of the tubular inner conductor (S1). With respect to claim 13, Forsyth discloses that the tubular inner conductor (S1) has a conduit (45) in its jacket that communicates to the conduits of the insulating material struts (B, Fig 4). With respect to claim 19, Forsyth discloses that the insulating material struts (B) are led through the outer conductor (S2), wherein the insulating material struts (B) float in an axial direction (Fig 4). With respect to claim 20, Forsyth discloses that the end of the insulating material struts (B) led through the outer conductor (S2) and is enclosed by a guide flange (PP) which is held in a recess of the outer conductor (S2) in a floating manner in the axial direction and is sealed radially elastically in relation thereto and in contact radially elastically therewith (Fig 3). With respect to claim 21, Forsyth discloses that the insulating material struts (B)

is held tiltable in an axial plane with its inner end in the inner conductor connecting element (S1) and with its outer end in the outer conductor (S2) wall (Fig 3).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forsyth (Pat Num 3,902,000) in view of Bogner et al (Pat Num 3,749,811, herein referred to as Bogner). Forsyth discloses a coaxial line that is utilized in a superconducting transmission line (Col 1, lines 5-11) as detailed above with respect to claim 1 above.

Forsyth doesn't necessarily disclose the plurality of sections which are separately coolable from one another and are connected electrically and mechanically to one another (claim 14), nor the inner conductors of adjoining sections of the coaxial line being connectable to one another via a complementary plug in connection (claim 15).

Bogner teaches a coaxial line that is utilized in a superconducting transmission line (Fig 5) that may be assembled from prefabricated sections, so that the desired length of the tube is produced without the advantages of the direct cooling which exist in rigid tubular conductors are retained (Col 2, lines 33-45). Specifically, with respect to claims 14-15, Bogner teaches a coaxial cable (Fig 5) comprising an inner conductor

(51) and an outer conductor (52), wherein each of the inner and outer conductors (51 & 52) have a reduced diameter such that the sections are electrically and mechanically connected to each other through by a plug in connection tube (55, Col 7, lines 28-45).

With respect to claims 14-15, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the coaxial line of Bogner to comprise the coaxial line configuration as taught by Forsyth because Forsyth teaches that such a configuration may be assembled from prefabricated sections, so that the desired length of the tube is produced without the advantages of the direct cooling which exist in rigid tubular conductors are retained (Col 2, lines 33-45).

***Allowable Subject Matter***

10. Claims 6-12 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: This invention deals with a coaxial line comprising a tube of smaller diameter that is sealed on its face at both ends is positioned coaxially in the tubular inner conductor and wherein the annular space between the tube and the tubular inner conductor communicates with the conduits in the insulating material struts (claim 6). This invention also deals with a coaxial line comprising a plug in connection including a flange plate which terminates the chamber of the inner conductor connecting element and comprises an axially extending first annular shoulder which overlaps a second



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annular shoulder on a flange plate of an adjoining line section and is overlapped to form a contact by a collar of axially extending contact springs which concentrically enclose the second annular shoulder (claim 16). The above stated claim limitations, in combination with other claim limitations, is not taught or suggested by the prior art of record.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Whitehead (Pat Num 3,331,911), Schmidt (Pat Num 3,946,141), Cookson et al (Pat Num 4,370,511), Metra et al (Pat Num 6,512,311), Meyer (Pat Num 4,053,700), Orgeret (Pat Num 4,323,720), Nassi et al (Pat Num 6,743,984), Kelch et al (Pat Num 6,166,323), and Kelch et al (DE Pat Num 196 13 026), all of which disclose high voltage coaxial cables.

### ***Communication***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III  
Primary Examiner  
Art Unit 2831

WHM III  
May 25, 2005